Indiana Statewide Access Management Study

Indiana MPO Conference

October 18, 2006

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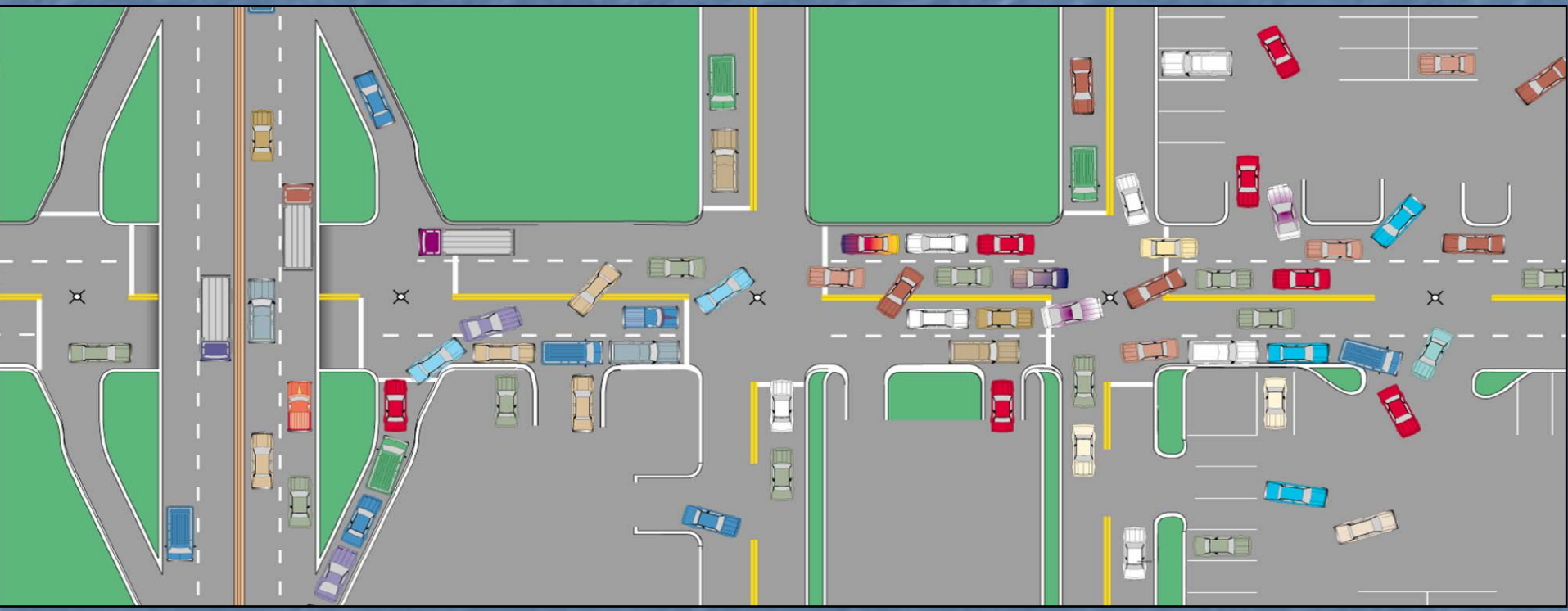
Overview of Presentation

- Overview of Access Management
- Report on INDOT Study
- Review of Study Products
- Elements of Implementation Plan

What is Access Management?

What happens if you don't manage access?



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Access Management is...

- A process that provides or manages access to land development while preserving the safety, capacity and efficiency of the roadway system

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Access Management is...

- The control and regulation of the spacing and design of:
  - Driveways
  - Medians
  - Median openings
  - Traffic signals
  - Freeway interchanges

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The Principles of Access Management

- Limit the number of conflict points.
- Separate the conflict points.
- Remove turning vehicles and queues from through movements.

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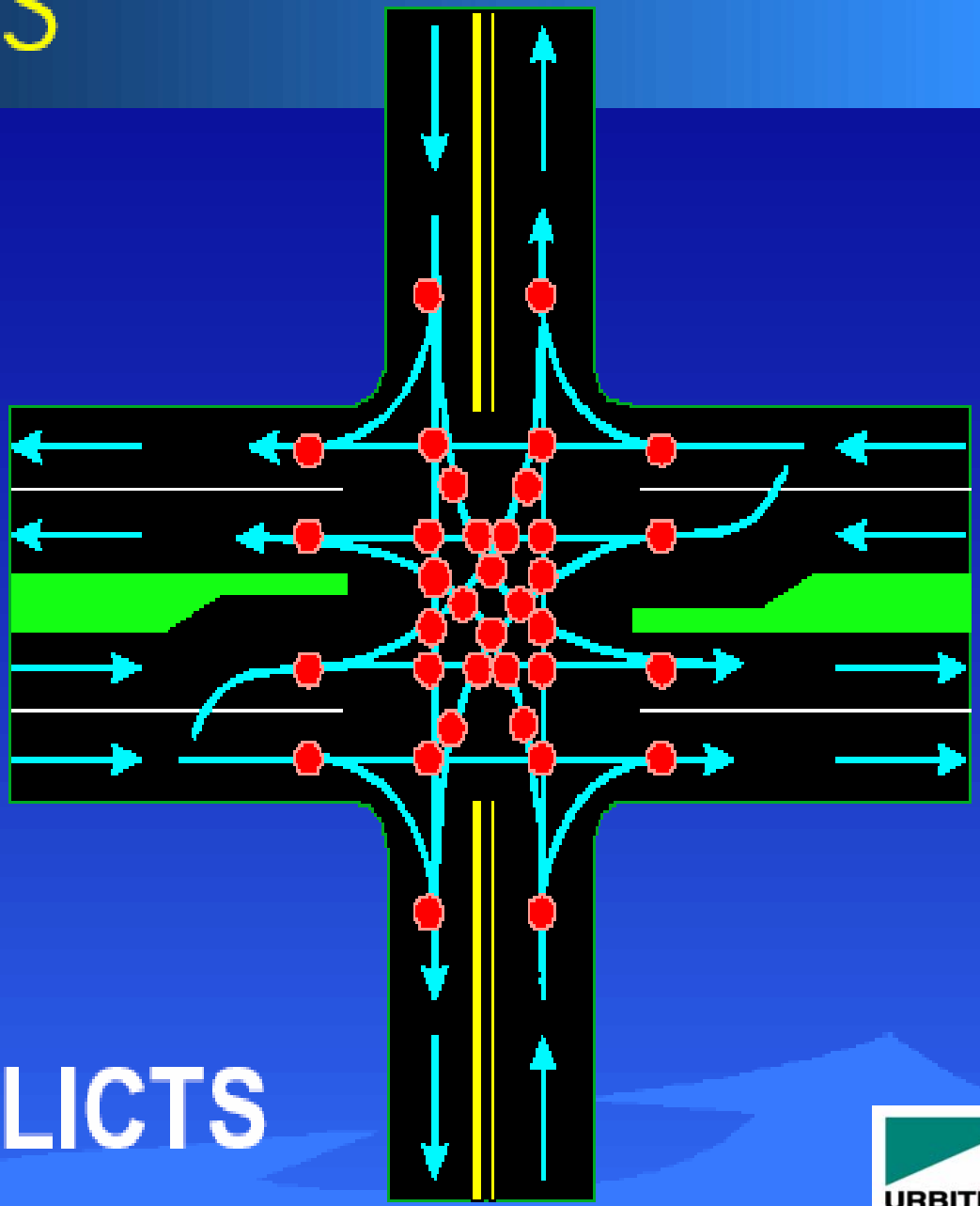
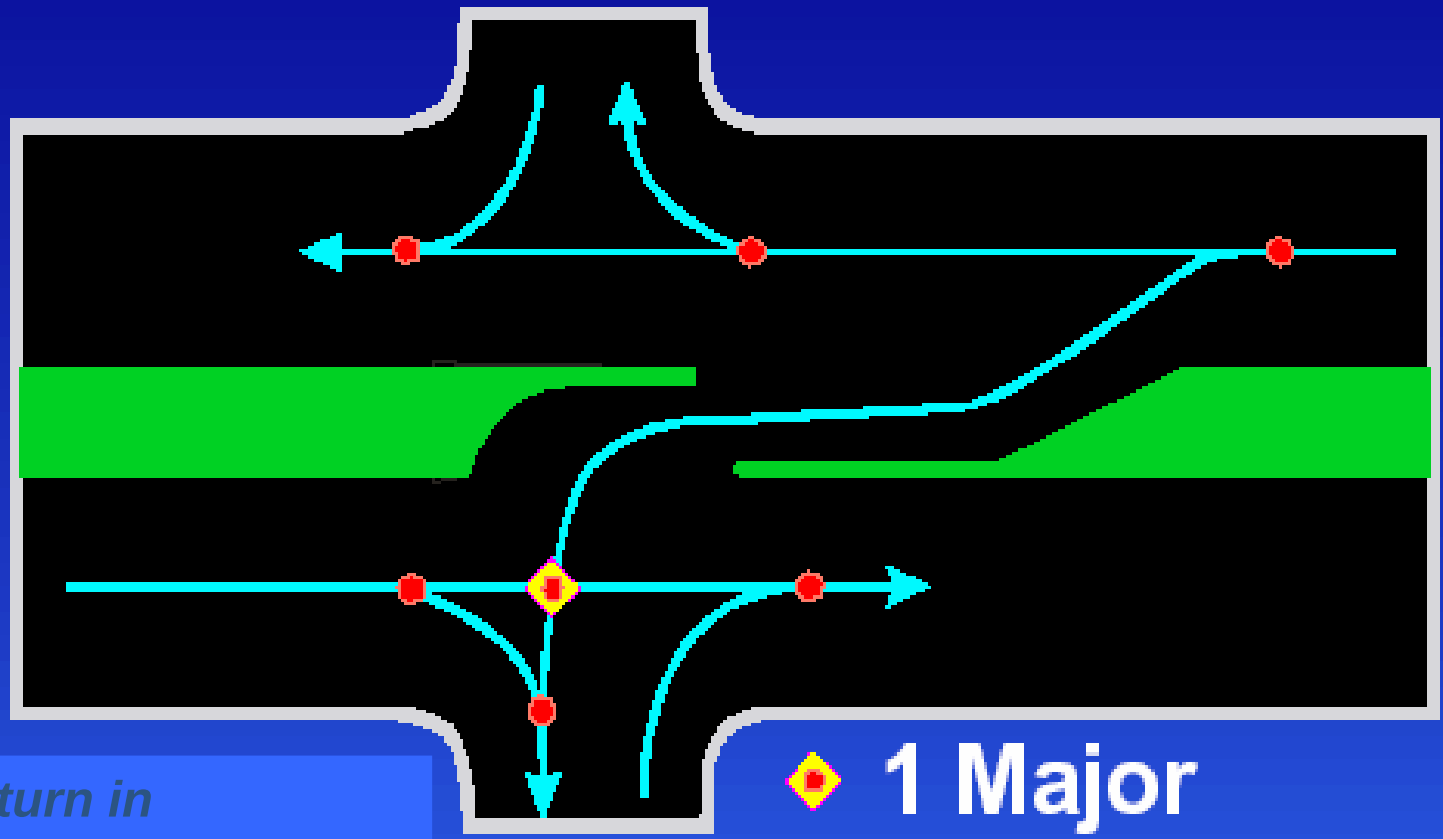
CONFLICTS



36 CONFLICTS

Conflicts



- 1 Major
- 6 Minor

7 CONFLICTS

Right-turn in
Right-turn out
Left-turn in (1 direction)

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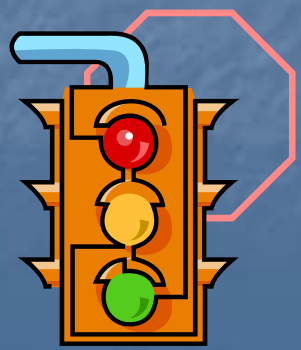
What are the benefits of Access Management?

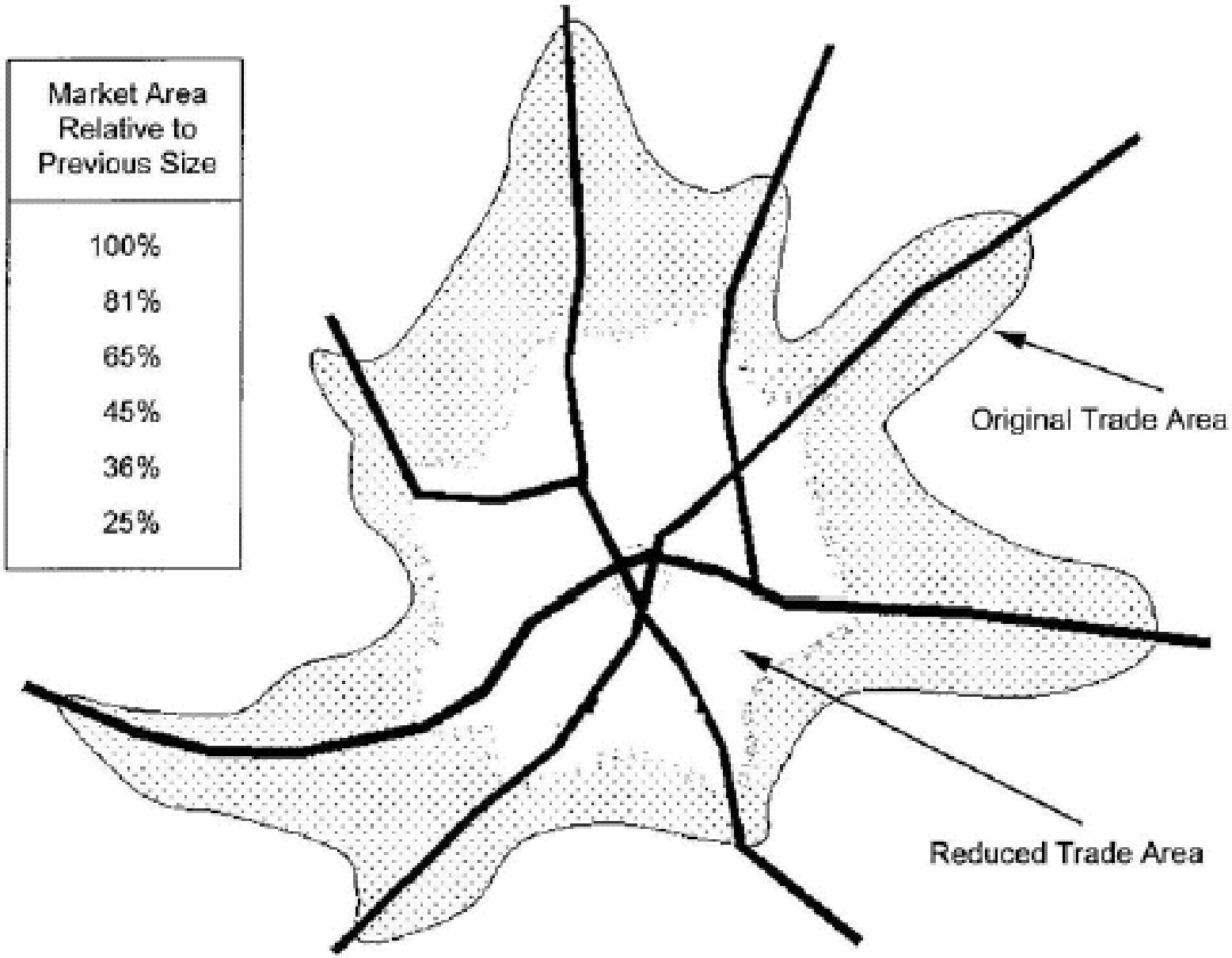
Benefits of Access Management

- System preservation
- Economic
- Environmental
- Roadway safety
- Traffic operations
- Aesthetic

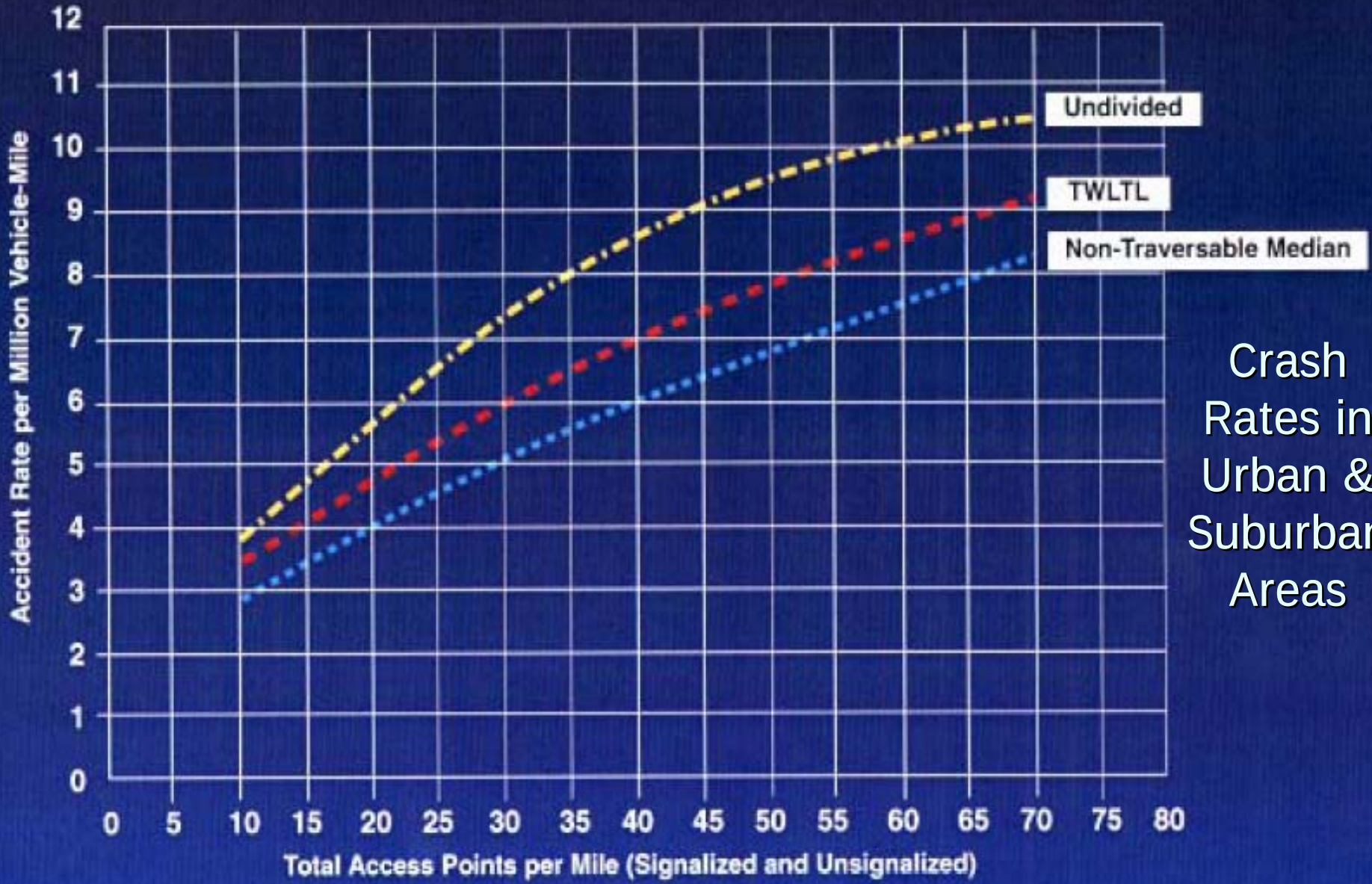


Economic Benefits

Reduction in Average Speed	Market Area Relative to Previous Size
0%	100%
10%	81%
20%	65%
30%	45%
40%	36%
50%	25%

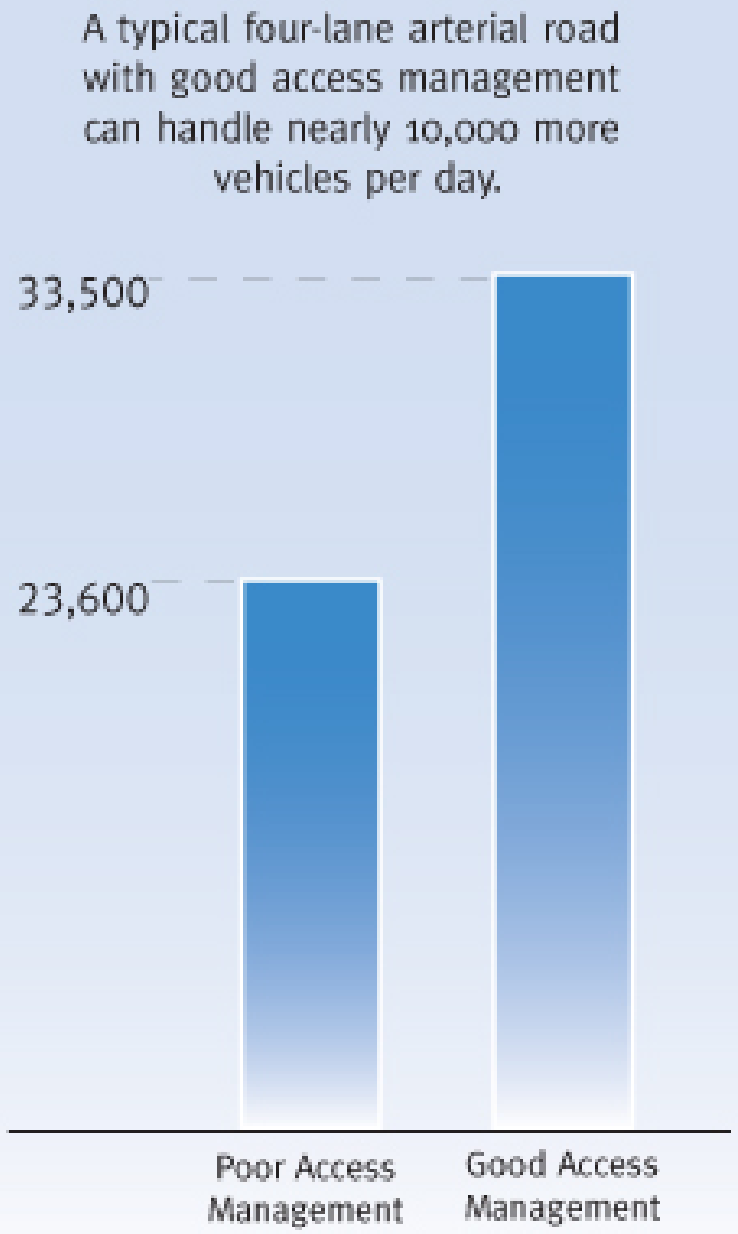


Safety Benefits

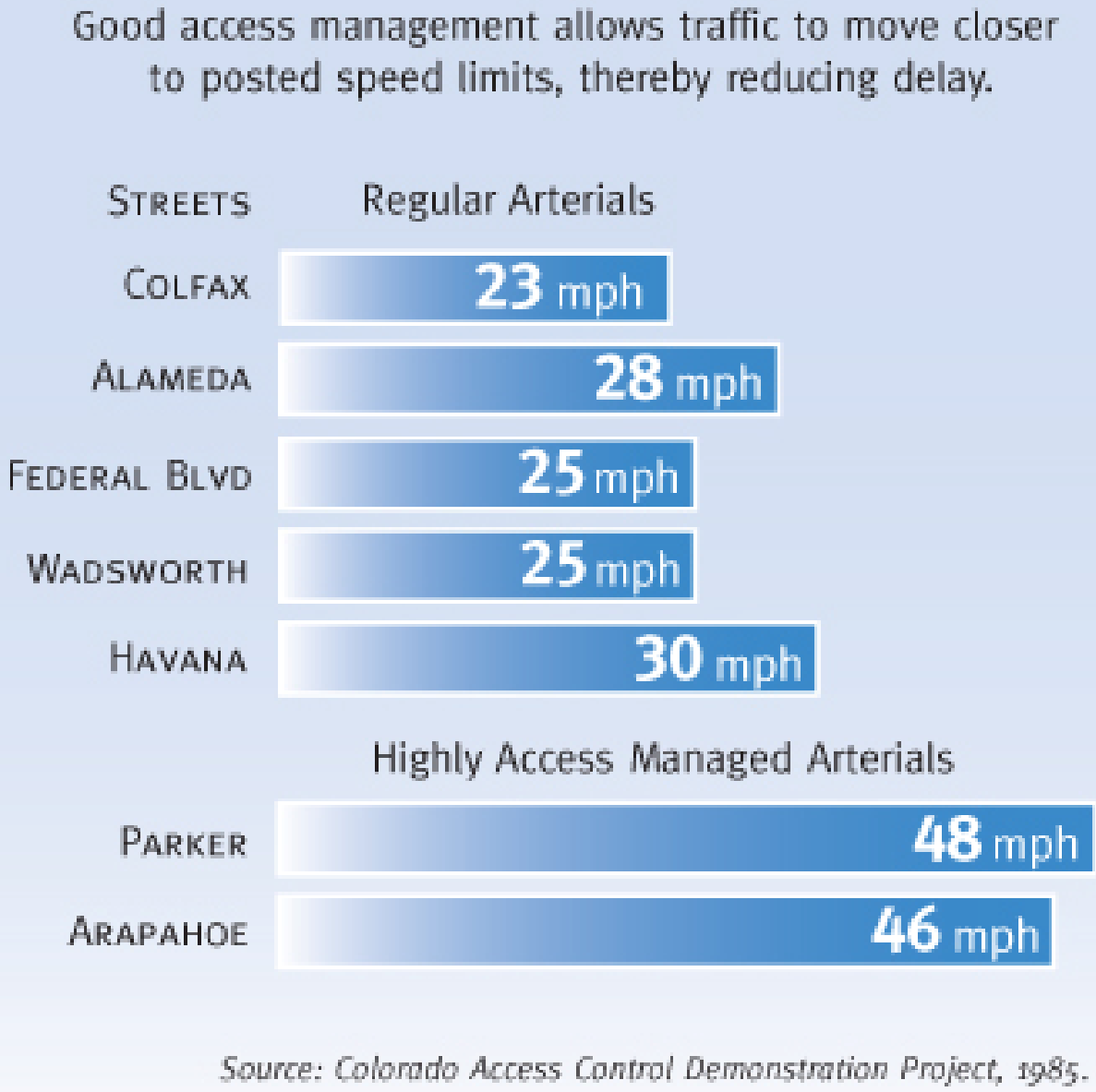


Crash Rates in Urban & Suburban Areas

Traffic Operations Benefits: Increased Capacity



Traffic Operations Benefits: Reduced Delay



Traffic Operations Benefits: Signal Spacing

Signals Per Mile	Percent Increase in Travel Time (compared to 2 signals per mile)
2	0
3	9
4	16
5	23
6	29
7	34
8	39

INDOT Access Management Study

- Consultant Team:
  - Urbitran Associates
  - Bernardin Lochmueller
- Advisory Committee
  - INDOT District/INDOT Central Office
  - Transportation Stakeholders—MPOs, IPA, Ind. Assoc. of County Eng. FHWA

Study Tasks

Task 1 – Establish Study Advisory Committee

Task 2 – Review Legislation and Rules

Task 3 – Review Current Practices

Tasks 4 and 5 – Develop and Refine Access Classification System

Task 6 – Identify Methods for Implementation

Task 7 – Develop Implementation Plan

Task 8 – Pilot Project: US-31 Corridor Preservation

Task 9 – Produce Access Management Guide

Task 10 – Conduct Training Courses

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INDOT Access Management Guide

- Final Product distributed to Study Advisory Committee and to be posted on INDOT Web
- Intended as a day-to-day reference manual for INDOT staff
- Intended for use in conjunction with existing documents:
  - *TRB Access Management Manual (2003)*
  - *Driveway Permit Manual*
  - *Applicant's Guide to Traffic Impact Studies*
  - *Roadway Design Manual*

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Elements of the Implementation Plan

- Adopt and Implement an Access Classification System
- Implement Access Spacing and Design Criteria
- Improve Local Coordination
- Training and Education Efforts
- Consider Retrofit Techniques
- Other Actions

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Considerations for Defining Access Categories

- Roadway functional classification
  - Role of the roadway in the transportation system
  - Arterial, collector, etc.
- Roadway design characteristics
  - Geometric features (median)
  - Speed
- Degree of urbanization
  - Development intensity
  - Intersection frequency

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Draft Access Classification System for INDOT

- Similar format to the Ohio DOT Access Classification System…
- …but incorporates features from:
  - INDOT 25-Year Plan – Mobility Corridor Concept
  - INDOT Roadway Design Manual – Areas Types
  - INDOT Driveway Permit Manual – Driveway Types

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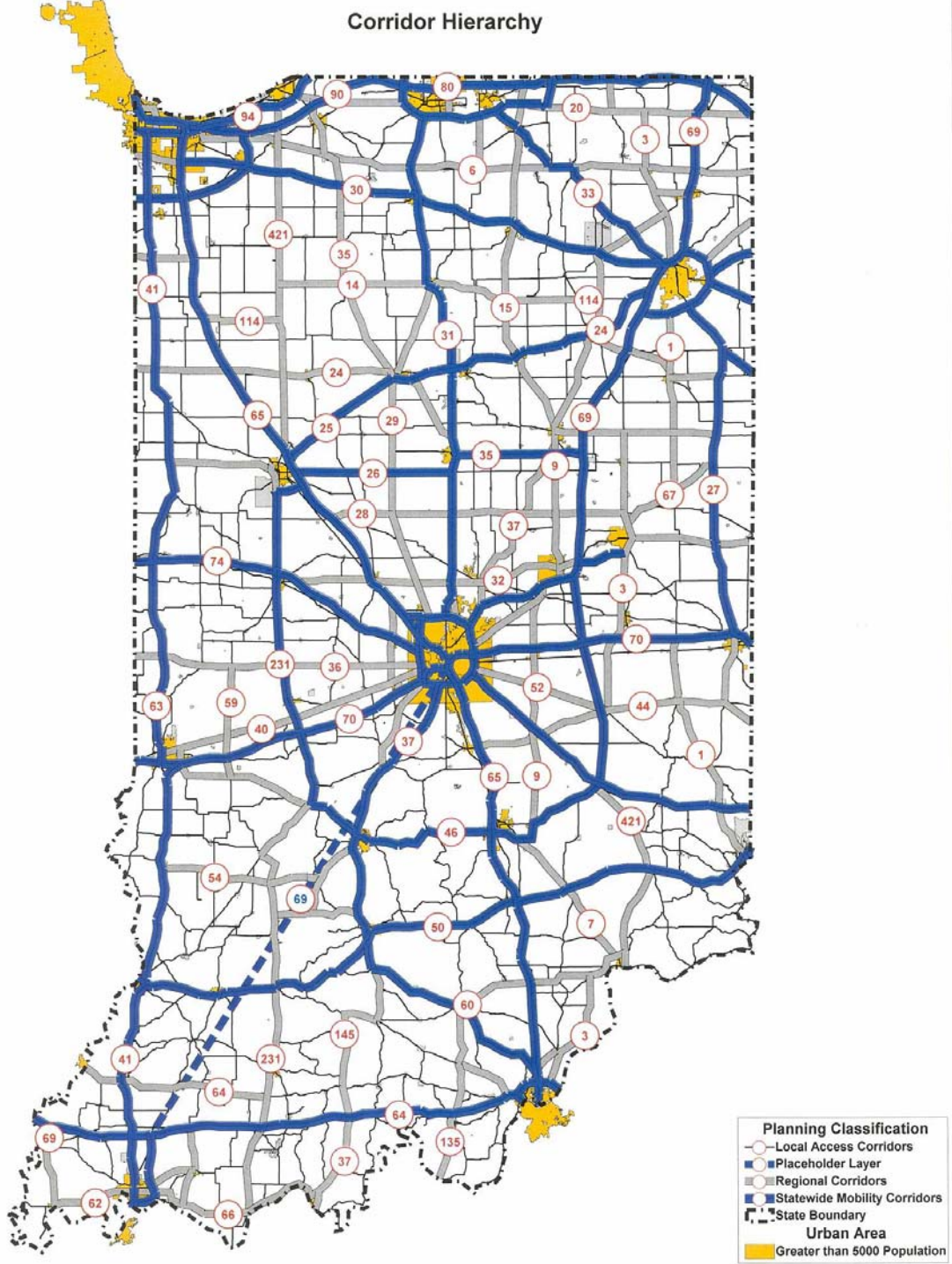
INDOT Mobility Corridor Concept

- Statewide Mobility Corridors
- Regional Corridors
- Sub-Regional Corridors



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Overview of INDOT Access Classification System

Access Category	Type	Cross-Section	At-grade intersections	Commercial Major Driveways	Other Driveways
Interstate Highways and Freeways					
Tier 1: Statewide Mobility Corridors	A	Multi-Lane			
	B	2-lane			
Tier 2: Regional Corridors	A	Multi-lane			
	B	2-lane			
Tier 3: Sub-Regional Corridors	A	Multi-lane			
	B	2-lane			
Special Transportation Areas (STAs)					

Tier 3: Sub-Regional Corridors, Type A

		At-Grade Public Street Intersections	Access Driveways[1]	
			Commercial Major	All other driveways
Permitted?		Yes	Yes	Yes
Traffic movements allowed		Full movements	Full movements[2]	Full movements[2]
Traffic control devices		Traffic signal[3]	Traffic signal[3]	STOP[4]
Spacing criteria	Urban areas	Unsignalized spacing per Table 8.1 of *Driveway Permit Manual*[5]	Unsignalized spacing per Table 8.1 of *Driveway Permit Manual*	Spacing per Table 8.1 of *Driveway Permit Manual*
		Ideal signalized spacing = 1/2 mile[6]	Ideal signalized spacing = 1/2 mile[6]	
		Ideal signalized spacing = 1/4 mile for roadways ≤ 40 mph in built-up urban areas	Ideal signalized spacing = 1/4 mile for roadways ≤ 40 mph in built-up urban areas	
	Rural areas	Unsignalized spacing per Table 8.1 of *Driveway Permit Manual*[5]	Unsignalized spacing per Table 8.1 of *Driveway Permit Manual*	Spacing per Table 8.1 of *Driveway Permit Manual*
		Ideal signalized spacing = 1/2 mile[7]	Ideal signalized spacing = 1/2 mile[7]	

Notes:

1: Driveways should not be situated within the longitudinal length of an adjacent auxiliary lane.

2: Limited to Right-In/Right-Out movements for driveways within 200-feet of an existing (or potential future) signalized intersection. Left-turn access may be allowed conditionally subject to INDOT review and approval.

3: Traffic signal installation subject to traffic signal warrant criteria per MUTCD and additional assessment by INDOT, including signal criteria. Where warrants are satisfied, the new approach should be situated opposite an existing 3-leg intersection, if present.

4: STOP control applies to the access driveway and not to the State highway.

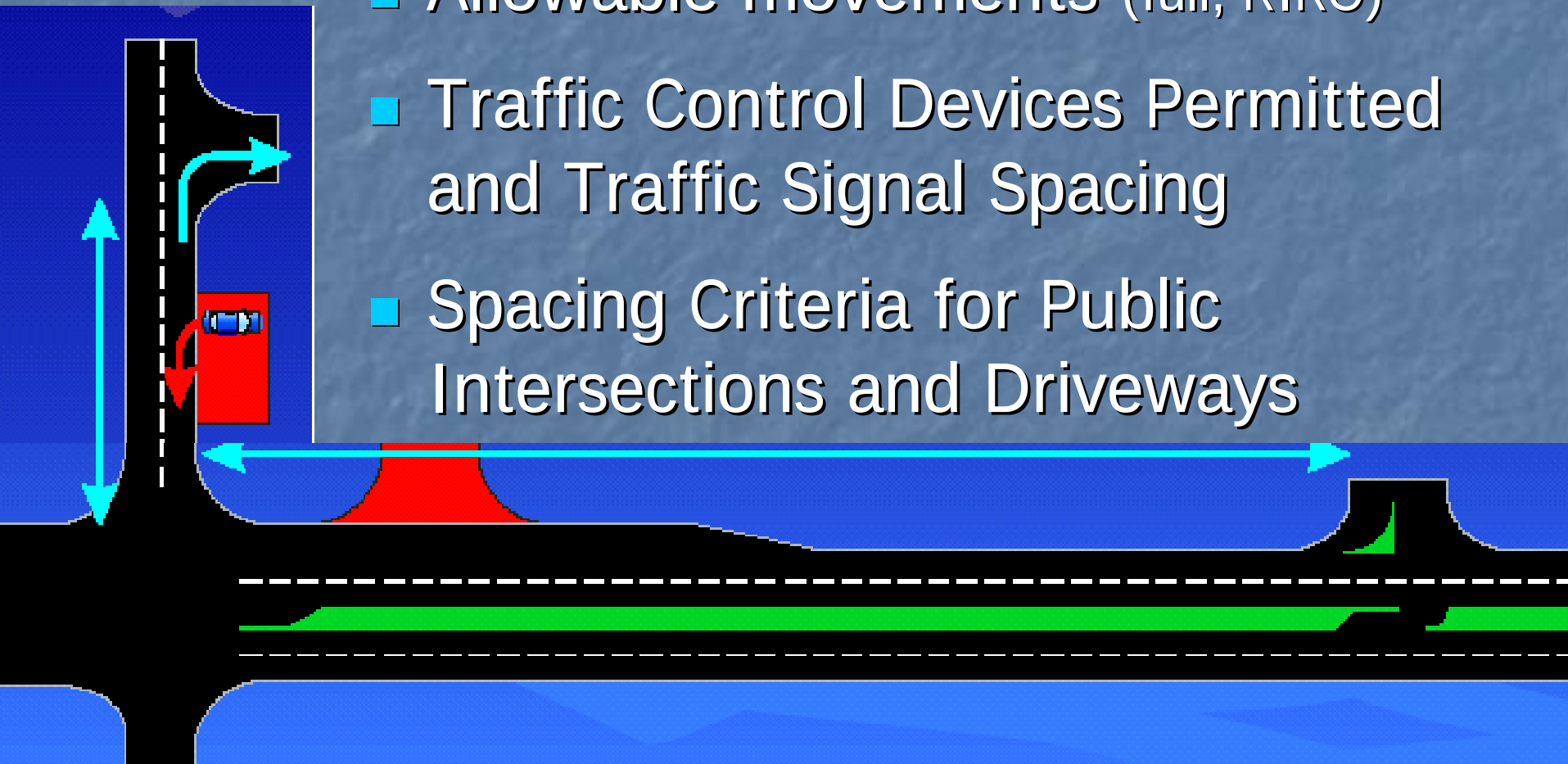
5: Except where future development may trigger the need for a signal, in which case the signalized spacing distance is to be applied.

6: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 35%.

7: Where 1/2-mile signalized intersection spacing guideline can not be met, minimum bandwidth must equal 40%.

Access Spacing and Design Criteria

- Type of Access permitted (public intersections only or driveways by classification)
- Allowable movements (full, RIRO)
- Traffic Control Devices Permitted and Traffic Signal Spacing
- Spacing Criteria for Public Intersections and Driveways



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Improve Local Coordination

- Rezoning actions and land use approvals
- Residential subdivisions
- Commercial developments
- Site plan review
- Other intergovernmental coordination

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Model Ordinances

- Land use actions generally beyond the direct control of INDOT
- Ordinance provides guidance to local governments
- Tool to help implement access management on the local level
- Indiana Adaptations of KYTC and MDOT Model Ordinances

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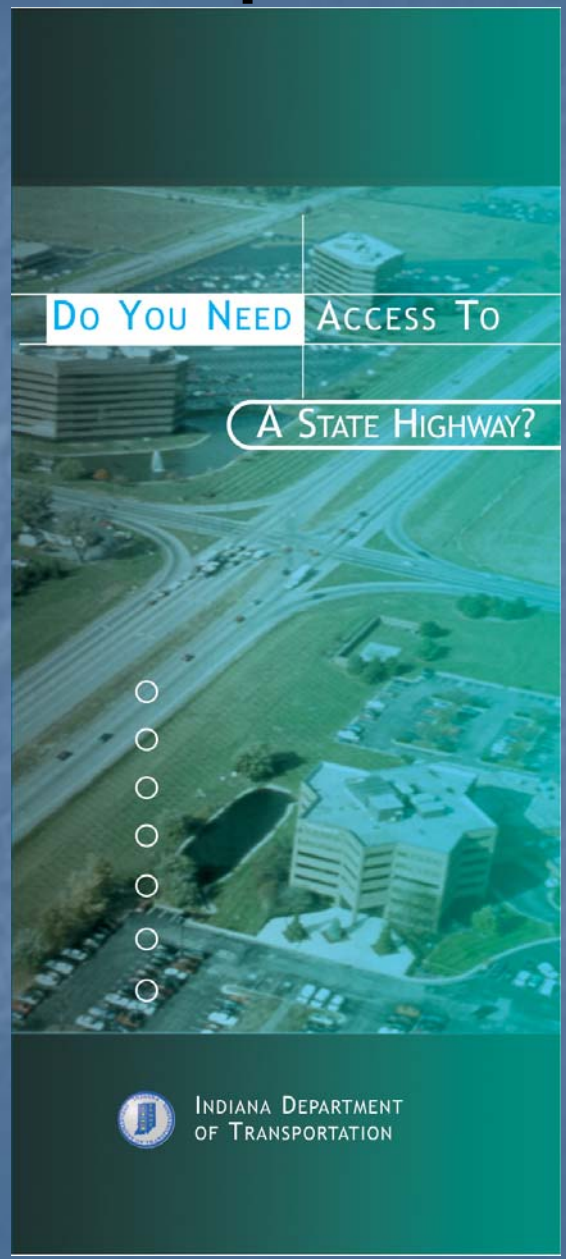
Training/Education

- Training for INDOT staff
- Educational efforts for other stakeholders

Educational Brochures and Pamphlets

- INDOT and Your Community: Partners in Access Management
- Improving Access Management in Indiana: A Cooperative State Local Approach
- Contains general information:
  - What is Access Management?
  - Why do it? Benefits?
  - “10 Ways to Manage Access”
  - Web-links
  - Contact information for INDOT District Offices



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Potential for Retrofit?

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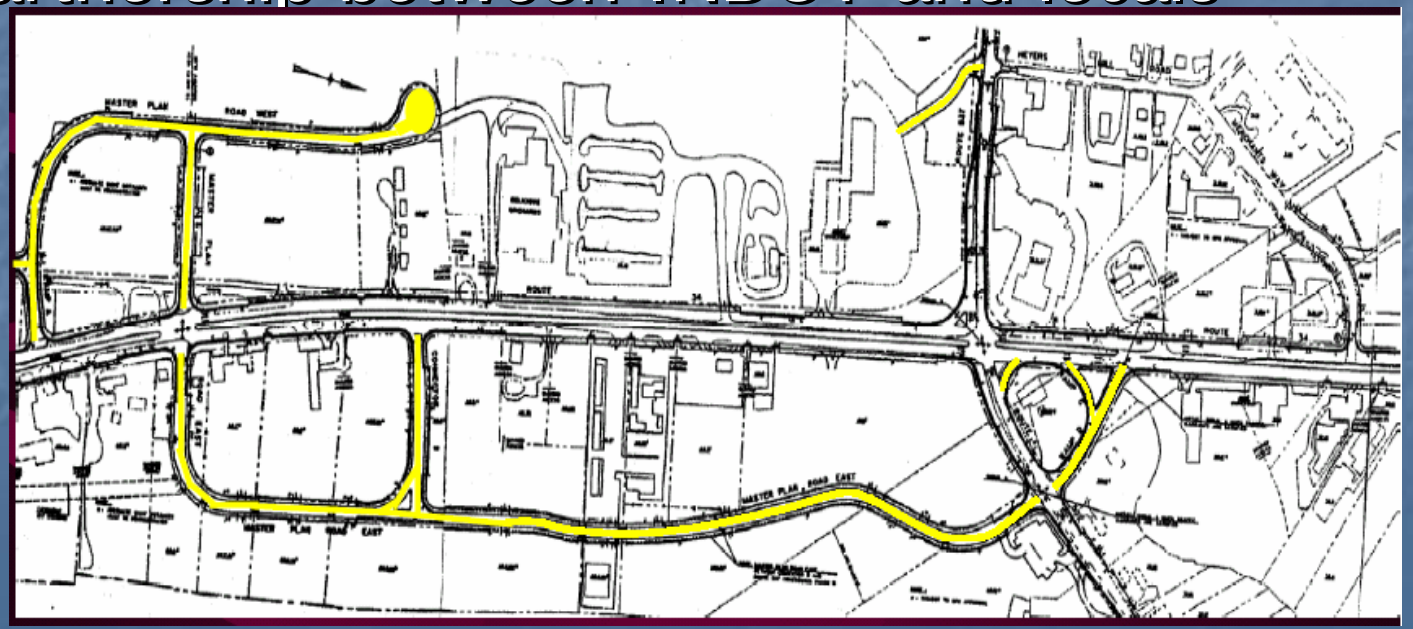
Prepare Access Management Plans

- Corridor-specific plans focused on high-priority problem areas (existing or potential future)
- Could be prepared for both developing areas and retrofit situations, although expected outcomes would be different
- Partnership between INDOT and locals



Purchase Access Rights

- The purchase of access rights helps INDOT manage access
- Focus on high-priority corridors
- INDOT has had projects to purchase rights in the past

Prioritize Projects with Access Management Benefits

- Consider access management benefits as a factor when prioritizing projects
- Similar to IPOC Scoring Criteria
- Reconstruction and Safety & Mobility Projects
- Prioritization could be both from funding or timing perspective

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INDOT Recommended Implementation Process

- Define internal organizational structure, and establish roles and responsibilities
- Phase 2 SPR Study for Corridor Level Access Management Plans and implementation support
- Form Implementation Team at INDOT
- Form Access Management Task Force

Contact Information

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